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(12) AUSTRALIAN PATENT ABSTRACT  
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(54) MOBILE MACHINE FOR SPRAYING OF FOOD OILS  
(71) MASTEROL FOOD OILS  
(21) 62443/86 (22) 26.8.86 (24) 26.8.86  
(43) 3.3.88  
(51)<sup>4</sup> B05B 11/06 B05B 13/04 A21C 9/04 A21B 3/16  
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In its broadest aspect, the invention provides a process which comprises a spraying system activated by compressed air which enables a product such as vegetable oil, emulsions, sauces, jams and creams to be sprayed onto the surface of the receptacle or food. More specifically, when the machine is used to apply oils to grease bakery vessels, it can quickly (by the movement of a switch) be converted to spray unrelated bakery vessels such as bread tins and bread-roll trays. In a related aspect, by being mobile and self-contained and free-standing, the invention provides the facility for cleaning with cleaning compounds which are not food compatible, away from the production line. Further aspects will become apparent from the ensuing description.



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Form 10

# COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE

Short Title:

Int. Cl:

Application Number: 624 43182  
Lodged:

Complete Specification—Lodged:

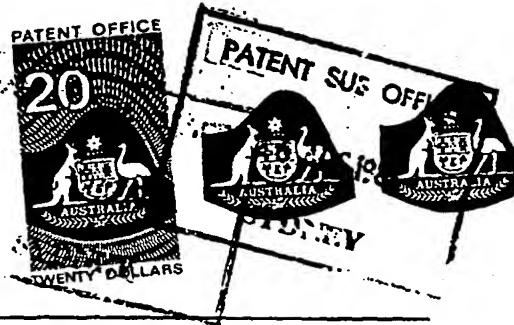
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TO BE COMPLETED BY APPLICANT

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Complete Specification for the invention entitled: AN IMPROVED PRODUCT - A MULTI-PURPOSE MOBILE MACHINE FOR THE SPRAYING APPLICATION, BOTH CONTROLLED INTERMITTENT SPOT-SPRAYING AND CONTROLLED CONTINUOUS SPRAYING, OF FOOD OILS & FOOD FLUID SUBSTANCES. The following statement is a full description of this invention, including the best method of performing it known to me:—

\* Note: The description is to be typed in double spacing, pica type face, in an area not exceeding 250 mm in depth and 160 mm in

The claims defining the invention are as follows:

This invention relates to the general field of machinery used in the food industry. More specifically, the invention is directed to products and a process which finds application in the greasing of bakery vessels, such as bread tins and bread-roll trays, as well as the application of fluids such as sauces or jams or creams to unbaked and baked food products. In the bakery art, problems often result from the lack of the ability of spraying systems to exactly spray (i.e. not to overspray) or pretreat bakery vessels and from the inability of the existing systems to be quickly converted to spray different types of bakery vessels.

Also in the bakery art, problems often result from the lack of the ability of spraying systems to exactly spray (i.e. not to overspray) fluids such as sauces, jam, fruit concentrates, syrups, creams and the like to unbaked or baked products.

It is the object of this invention to provide a process whereby such problems are overcome or - at least - substantially alleviated.

In its broadest aspect, the invention provides a process which comprises a spraying system activated by compressed air which enables

a product such as vegetable oil, emulsions, sauces, jams and creams to be sprayed onto the surface of the receptacle or food. More specifically, when the machine is used to apply  
5 oils to grease bakery vessels, it can quickly (by the movement of a switch) be converted to spray unrelated bakery vessels such as bread tins and bread-roll trays. In a related aspect, by being mobile and self-contained and free-  
10 standing, the invention provides the facility for cleaning with cleaning compounds which are not food compatible, away from the production line. Further aspects will become apparent from the ensuing description.

15           The invention will now be described with reference to details and specific examples. It will, of course, be understood that such description is intended to be merely illustrative of the invention and therefore should not be  
20 limitatively construed.

          The spraying machine is able to spray various fluids such as vegetable oils, emulsified vegetable oils, sauces, jams, fruit concentrates, chocolate and other fluids of an edible quality  
25 which may be used in production processes in food and baking factories. The invention is able to spray continuously or intermittently, this

function being adjustable by a control on the control panel.

5 The spraying mechanism requires compressed air to activate the system and the electronic controls are powered by a single phase 240v 50-60 cycle.

Example 1:

10 In the particular application in the greasing of bakery vessels such as bread tins, a proximity switch senses the presence of the metal container and the machine sprays the bread tin with two or three of the spray guns, as determined by the operator. The same machine can be used to spray other bakery vessels such as bread-roll trays with accuracy as now described.

Example 2:

20 In the particular application in the greasing of bakery vessels such as indented bread-roll trays, such is the design of the machine and the electronic control panel, a simple adjustment will allow the machine to spot-spray the indentations found in indented bread-roll trays without the spray covering the whole of the tray. Because the spraying of bread-roll trays is carried on at a different location in the baking factory and on different conveyor systems than the spraying of bread tins, the mobility of the machine enables it to be moved to a spraying station anywhere on different conveyor operations

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where the base can fit under the conveyor whilst  
at the same time, the spraying section fits over  
the conveyor. If the bread-roll trays are  
sprayed at a different time to the bread tins,  
5 which is the case much of the time, the one machine  
will perform both requirements at designated  
locations.

This is an advantage over what is already  
known.

10 A simple movement of a switch then enables  
the machine to continuously spray flat trays or  
trays known as torpedo trays for the full length  
of the tray and only the full length of the tray.  
This is also achieved by a proximity switch which  
15 senses the presence of the tray and a timing  
switch which is adjusted to suit the length of  
the different types of trays.

The control panel utilises a combination of  
timers and potentiometers to enable the Mode One  
sequence to be carried out correctly in the case  
20 of spraying bread tins and indented bread-roll  
trays and the Mode Two sequence to be carried out  
for the continuous spraying of bread-roll trays.  
Changing from Mode One to Mode Two is achieved by  
operating a switch.  
25

Thus, the same machine can perform with  
accuracy both functions.

This is an advantage over what is already known.

Example 3:

5       The ability of the one machine to exactly spot-spray and exactly continuously spray finds a further application in the spraying of cake tins, baking sheets, pie tins and the like as used in the manufacture of baked goods.

Example 4:

10       The ability of the one machine to exactly spot-spray and exactly continuously spray finds a further application in the spraying of edible fluids such as sauces, jams, fruit concentrates, creams and the like onto uncooked pastries, cakes, 15 confections, including chocolate coatings.

Example 5:

20       The ability of the one machine to exactly spot-spray and exactly continuously spray finds a further application in the spraying of sauces, jams, fruit concentrates, creams, chocolate and other flavourings or coatings onto cooked cakes, pastries, confections and the like.

FACILE CLEANING

25       Because cleanliness in the dispensing of food products is important and because oils when sprayed oxidise easily, leaving a gummy, sticky residue which builds up quickly and is difficult to remove except by scraping or by very caustic chemicals, the invention, in total, (including

electronic control panel) is mobile, thereby enabling the machine to be removed to a convenient location where various cleaners, which may not be desirable to be used in a food factory, can be used to clean the machine. When the machine is moved from its usual spraying station or stations, the lead to the proximity switch is unplugged without the need to remove the proximity switch from any position on the conveyor system. After cleaning, the machine can be wheeled back to its original or any other spraying station in the factory.

This is an advantage over what is already known.

The claims to finding the invention are as detailed above and the invention substantially as herein described.

Dated this fifth day of June, 1986

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(BLOCK LETTERS)



